

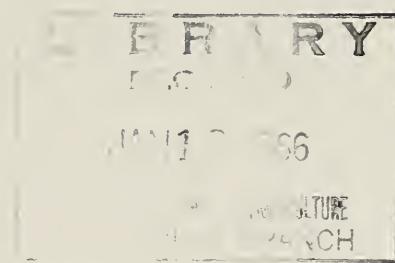
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Service and Self -Service Bakery Departments In Retail Food Stores



**Agricultural Research Service
U.S. Department of Agriculture**

PREFACE

This study was made under the supervision of Dr. R. W. Hoecker, Chief, Wholesaling and Retailing Research Branch, Transportation and Facilities Research Division, Agricultural Research Service.

Giant Food Stores, Inc., Jumbo Food Stores, Inc., and Consumers Discount Supermarkets, of Washington, D.C.; Red Owl Stores, Inc., Super Valu Stores, and Applebaum's of Minneapolis, Minnesota; and other firms furnished the use of their retail store facilities for studies and observation.

CONTENTS

	Page
Summary	i v
Background of the study.....	1
Service and self-service bakery departments	2
Operation of a bakery department.....	3
Ordering.....	4
Receiving.....	4
Price marking and display	6
Department location and space allotment	9
Stale bakery products.....	11
Shelf life.....	11
Causes of stale products.....	12
Disposition of stale products	14
Methods of reducing occurrence of stale products	15
Labor costs and methods of reducing them.....	16

SUMMARY

Store labor costs were substantially higher in service bakery departments than in self-service departments-- $2\frac{1}{2}$ cents per unit sold, compared to $\frac{1}{2}$ cent. Within service bakery departments, which also had self-service sections, the cost per unit sold was 9 cents in the service and 1 cent in the self-service section. The high cost of the service section was offset by such considerations as: Sales of high-profit specialty products (cakes, pies, cookies) were much higher, and customers liked the large selection of specialties, the opportunity to order specialties ahead of time, and the personal contacts with clerks.

To reduce labor costs, each clerk should be furnished with a job description outlining specific duties and approximate time for their completion, and instructed in techniques used in ordering, recordkeeping, displaying, and merchandising. In the service section: (1) Provide jobs associated with the bakery department or in the department area to utilize each clerk's time between customers; (2) supply necessary price markers, scales, and wrapping materials in convenient locations along sales counters; and (3) provide an efficient work area behind the sales counter to package products.

The number of stale bakery products varied from 7 to 16 percent of each store's total

bakery sales. The demand products (bread and rolls) comprised 63 to 82 percent of the stakes. A sound program of displaying products will help increase sales and reduce the number of stale products. Frequent servicing and stocking during the day will insure a neat appearance and a full supply for easier selection and maximum sales.

As correct ordering is an important factor in the success of a bakery department, the order form should be used as a guide to minimize over- or under-ordering. The order form should contain not only the regular daily product information, such as the number ordered, sold, carried over, and discounted, code number, retail price, shelf life, and availability, but also information on advertised products, anniversaries or holidays, special events, and unusual weather conditions.

Before allotting space to each product, management should ascertain its potential sales. The method of display-stacking an item one high, or more than one high, on straight or slanted shelves, or the use of trays, which are placed one on top of another for mass display of economy priced bread, will also be a determining factor in space allotment.

Service and Self-Service Bakery Departments In Retail Food Stores

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BACKGROUND OF THE STUDY

The bakery department is an integral part of a retail food store. Sales of bakery products, which include freshly baked bread, rolls, sweet rolls, doughnuts, pies, cakes, and cookies, amounted to \$2,758,840,000 in 1963. This was 5.6 percent of total retail grocery store sales.¹

Bakery products are among the most perishable products in a retail food store. Since many of the items have a 1-day shelf life, care is needed in ordering and displaying them. Rising costs of distribution and proper methods of handling in the stores are major problems to the bakeries and supermarket operators.

The objectives of this study were to survey different types of bakery operations in supermarkets, to evaluate alternative techniques for handling products in the service and self-service departments, to determine labor utilization and space allocation, and to analyze disposition and handling of stale products.

Studies were made in bakery departments of 20 retail supermarkets on layout, equipment, operating practices, and methods used in ordering, receiving, and displaying products. Personal interviews also were conducted with the management of retail food organizations. Detailed studies were made in four

supermarkets selected as representative; most of the data presented are for a typical week's operation in these stores. Two of the stores had service bakery departments and two had self-service departments.

The supermarkets studied received their products from: (1) a central bakery, (2) a commercial or wholesale bakery, or (3) an independent or retail bakery.

A central (company) bakery is part of the same organization to which the retail food stores belong or in which they are associated. This organization may be a corporate chain on a local, regional, or national basis; a cooperative wholesale company in which the retail food stores are stockholder members; a voluntary group sponsored by a wholesaler, operating under a common name; or a consumer-owned organization.

A commercial or wholesale bakery sells chiefly at wholesale to other businesses.

An independent or retail bakery sells products through its own retail stores; multiple-unit independent bakeries may bake in a central plant and deliver to their own retail stores and also lease bakery departments in grocery stores. Some independent bakeries conduct a wholesale business in addition to their own stores or leased departments. The independent bakery referred to in this report supplied products to the retail food store on a wholesale basis.

¹ How Consumers Spent Their Grocery Dollars in 1963. Food Topics 19 (9): 7-20. September 1964.

In the supermarkets in which detailed studies were made, the two having service departments received products from a central bakery and from commercial bakeries. One of the supermarkets with a self-service department received products from an inde-

pendent bakery and from commercial bakeries, while the other received products from commercial bakeries only. Methods of receiving and handling products at the supermarket differed, depending on the type of supplier.

SERVICE AND SELF-SERVICE BAKERY DEPARTMENTS

Service and self-service bakery departments differ in the personal service given the customer at the time of purchase; the methods of wrapping and pricing packages; in many cases, the type and quality of the products sold; and the sales mix or the relative percentages of items sold.

A service bakery department seldom has a 100-percent service operation. It is usually combined with a self-service operation, where products wrapped at the central bakery or at the store are displayed, as well as commercial products.

Service sections in many stores are open the entire time that the stores are open. However, in other stores the service section is closed at a certain time and all leftover products are wrapped and price marked and thus converted to self-service selling the rest of the day.

The bakery clerks who operate the service section display the unwrapped products in show cases. They package and price the customers' purchases, and in some firms, they receive payment from the customers for the purchase. In other firms, purchases are paid for at the checkstands. In many firms, bakery clerks wrap and display some products during the day when they are not busy serving customers.

Store operators with a service department contend that personal selling insures more sales and more satisfied customers. Selling costs, therefore, are a secondary consideration if personal selling increases the number of customers and total store sales and if added sales cover the costs.

Advantages of operating a service bakery department are:

1. The clerk gives personalized service and establishes friendly relations with the customers.

2. The clerk promotes sales of new products by informing the customers of their makeup, by giving samples, and by suggesting particular items.
3. Close personal supervision limits the number of stale products.
4. Customers' orders for special occasions can be handled expeditiously.
5. It is sufficiently flexible to use self-service displays of specially priced products, new products, specialty items for holidays or festive occasions.
6. The customer has greater freedom of choice of variety or size of product. For example, she can purchase one or more of each variety of doughnuts or sweet rolls, or half of a cake.

A self-service bakery department has a 100-percent self-service operation where all products are displayed for the customer's convenience. The customer selects wrapped products displayed on shelves or tables and takes them to the checkout counter for payment. Customers can obtain products for special occasions by ordering from a store clerk who relays the order to the bakery.

Operators of self-service bakery departments feel that high quality products wrapped in eye-appealing packages, displayed to their best advantage, will sell as many products as a service department, at lower operating cost and in less space.

The advantages of a self-service bakery department are:

1. Labor costs are much lower than for a service department, especially in a small volume store.
2. Space and display equipment costs are relatively low.
3. Customers do not have to wait to purchase products.

4. It is easy to set up the self-service department.
5. Large displays can be made to promote new or specialty products.
6. Displays can be set up throughout the store for special promotions or advertised products.

An analysis of weekly sales in the two types of bakery departments showed that in two stores having a service department, the sales percentages of demand products (bread and rolls)² were much smaller in relation to total bakery sales than in two stores with self-service departments (table 1). Specialty products (cake, pie, cookies), which have a higher gross margin, had a higher percentage of sales--16 and 27 percent, compared to 7 and 13 percent in the self-service departments.

In store number 4, a self-service department supplied entirely by commercial bakeries, sale of demand items amounted to 78 percent of all bakery sales.

Bakery products displayed in a service department are assumed by many customers to be of higher quality than products sold in a self-service department. In many cases this is true. However, many products are wrapped in service departments so they are available on a service or self-service basis. Many firms who have had service departments have converted to self-service by having the products wrapped at a central bakery and shipped to the stores. The quality of the products has not been changed, and it is the firm's and store management's responsibility to inform the customers of this.

TABLE 1.--Sales percentages by product category of service and self-service bakery departments in four retail food stores

Products	Service bakery		Self-service bakery	
	Store No. 1	Store No. 2	Store No. 3	Store No. 4
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
White bread ¹	23.5	28.5	39.3	46.2
Variety bread ²	18.4	21.6	18.6	13.1
Rolls.....	8.7	9.0	12.2	18.9
Brown and Serve rolls....	3.8	2.9	2.6	1.7
Sweet rolls ³	12.5	16.1	14.5	5.4
Doughnuts.....	6.0	5.8	5.4	2.1
Cake.....	18.8	10.0	6.5	9.3
Pie.....	4.7	3.1	.5	3.2
Cookies.....	3.6	3.0	.4	.1
Total.....	100.0	100.0	100.0	100.0

¹ White bread is limited to the regular pan loaf, including potato and buttermilk, all packaged at the central bakeries.

² Variety bread included all bread except white.

³ Includes Danish rolls, coffee cakes, and sweet buns.

OPERATION OF A BAKERY DEPARTMENT

The work involved in operating a bakery department on a service or self-service basis, or a combination of the two, involves order-

ing products, receiving them, and price marking and displaying.

When products are received from a central bakery, the store clerks or bakery clerks order products, display them, and service the department during the day.

² Excluding Brown and Serve and sweet rolls.

Commercial bakeries employ driver-salesmen to stop at each retail store and display products in space allotted to them by the store management. Commercial bakeries may be a primary source for products in some stores and a secondary source in others. They are a primary source when their products are the only ones displayed for sale. When they are the primary source, they are allotted a certain amount of space with very little limitation on the number and types of products to display. They are a secondary source in stores that receive products from their own central bakery or an independent bakery. In such stores, they are limited as to space and the type and number of products that can be displayed. Their products are sometimes carried because of strong customer demand or because similar products are not baked by the store's central bakery.

Independent bakeries operate with various arrangements. One bakery may have a representative visit each store that carries its products, both to display and order products. Another bakery may have its representative order the products, and a store clerk may display them. Still another bakery may ship unwrapped products to a store, and the bakery's own personnel may wrap them in the store, display them, and order products.

Ordering

Central and independent bakeries use an order form to fill the needs of each retail store. Usually each firm designs its own. Some or all of the following information is usually incorporated in the order form: Name and code number of each product; retail price, shelf life, and days each product is available; the number ordered, received, and sold daily; the number left over, discounted, and sold daily. Other information affecting sales that can be incorporated in the form includes: Advertised products; sales of related products in other departments in the store; anniversaries or holidays; special events in the shopping area; and unusual weather conditions.

There are various methods of ordering products. In some companies, ordering is done once a week for each day's supply for the following week. Adding to or cutting the

order can be done 1 to 2 days and sometimes 8 hours prior to baking, with the time depending on the type of product. In other companies, ordering is done each day for the same day the following week and changes are also permitted up to 8 hours before baking. Orders for holidays or special events are often sent to the bakery up to 2 weeks in advance.

Order forms used by commercial bakery drivers may vary from a blank with just the company name on the top to a printed form with names of the products and their wholesale or retail prices, or both. Any products not printed on the form are written in by the driver, who also writes the wholesale and sometimes the retail unit price for each product. The number and the wholesale price of each product are then calculated on the form and totaled.

Stale products taken out of the store usually are not categorized. All the products having the same wholesale price are counted and their total price recorded on the order form. Totals for all stale products are subtracted from the total costs of the products coming into the store and the difference is the amount owed by the store. In such cases, neither the store management nor bakery management knows what particular products are being removed from the store and returned to the bakery. Effective control of stakes calls for itemized return records to show whether any product is overstocked. An example of a completed order form designed to facilitate ordering products is shown in figure 1. It combines a record of the number of products received and returned, plus the wholesale and retail price of each (the retail price column could be omitted from the form if the supplier found it desirable). The names of the products and their prices should be printed on the order form. This would save the driver time and also eliminate the possibility of his charging the wrong wholesale price.

Receiving

In the stores studied, products from central and independent bakeries were received at the front or rear door and taken to the display area by the driver or store clerks. Checking of the order was done by a piece count against the order form. When no one

BAKING COMPANY

Address

Phone

Sold To -

Date -

Route No. -

Receiver -

Item	Retail Price	Quantity	Wholesale Price	Amount	Returns	Amount
1/2# White	.24	10	.20	2.00		
1 1/2# Sandwich	.34	10	.27	2.70	2	.54
Potato	.24	6	.20	1.20		
Rye	.27	4	.22	.88	2	.44
Wheat	.27		.22			
Dinner rolls	.29	5	.24	1.20	1	.24
Hard rolls	.29	5	.24	1.20		
Buns	.27		.22			
Doughnuts	.29	6	.24	1.44	2	.48
Cakes	.39	3	.32	.96	1	.32
Cakes	.49	2	.40	.80		
Total				12.38		2.02

Figure 1.--An example of a completed order form for commercial bakeries.

was at the store to receive the products, the driver either left them outside or, if he carried a key, inside the store. Products were delivered in castered closed storage cabinets, wire baskets on 4-wheel dollies, and in reusable cardboard boxes. A regular inspection of the shipping equipment to see that it is in good order will make receiving easier and will reduce damage to the products.

Receiving products from commercial bakeries created more of a problem than receiving products from company or independent bakeries because of the number of

suppliers and irregular delivery times. Stores had various arrangements for receiving products in the backroom. In many stores, a regular backroom receiver was on duty the entire day to check all incoming and outgoing products. In some stores, a regular receiver was on duty mornings only; he received products in the afternoon only when necessary. In other stores a worker was assigned to receiving only when necessary. When products were received at the front door, they were checked by a checkout clerk upon entering the store, or by a store or bakery clerk at the display.

In each method of receiving, a considerable amount of time was used by the clerk while waiting for each driver to display and arrange his products and leave the store.

Products were received in a variety of containers: wire baskets, open or closed cardboard, fiberboard, or wooden boxes, cardboard sleeves, and paper sacks. Products were put on dollies, stocking trucks, or in shopping carts, and wheeled to the display area (fig. 2). Often the drivers carried them by hand. Many drivers used the store's equipment to wheel the products to the display.

The receiver had a difficult time checking products brought in sacks, cardboard sleeves, and closed cardboard boxes. In order to save time for both the receiver and the driver, each driver should carry his own equipment and also put all products into open containers before entering the store.

Price Marking and Display

In the service section of many stores, customers' purchases that were put in a paper sack or box were price marked with a crayon, pencil, or pen. In some stores, prices were rung on a register and the sales slip was attached to the sack or box. Purchases were then taken to the checkout counter. Usually staples were used to close sacks and string or scotch tape was used on boxes. In some stores, the sacks were not stapled for fear of staples falling into the products when the sack was opened by the customer.

One or more bakery clerks displayed all unwrapped products in glass enclosed showcases of various lengths and heights. Refrigerated cases were used for cream and custard products. The display shelves could be adjusted for 2, 3, or 4 tiers, depending on the variety of products received, the number of each to be displayed, the length of the cases, and the best concentration of products for the most effective display.

The products were put on full size (18" x 27"), half size, and quarter size pans. Large products such as cakes and pies were displayed individually. In many stores, the products were transferred from the baking pans to the store's display pans, which presented a much neater appearance. Products not displayed were put in holding areas in the department or left

in the shipping cabinets until needed for display.

For the self-service department, many products wrapped at a central or independent bakery were also price marked there. Products not priced at the central bakery were priced by clerks at some stores, and in others, a list containing the names and prices of the products was sometimes placed at each checkstand. In many stores, however, the checkers had to remember the prices. A better policy would be to have all products price marked and thereby protect the customer, the store, the checkers, and the suppliers. There would also be fewer delays at the checkout if the price marking is legible and in a uniform position on each product.

Price marking central bakery products by store personnel can often be done at the display. However, price marking of commercial products by the drivers in the display aisle can create congestion. If drivers can price mark the product before bringing it into the store, their time in the store and consequently the time of the store receiver would be reduced. In stores having a full-time receiver, the drivers can price mark in the backroom, providing they don't create congestion.

Price marking is usually done with an adjustable hand stamp. Previous research on price marking showed that using the porous self-inking stick stamp (held in a base with a reservoir of ink) was the most efficient method of stamping the price on the merchandise.³ Each bakery department can determine the prices most commonly used for their products and have a set made. Each commercial bakery driver should carry a similar set for his price marking. At the time of the study, the following 30 retail prices were found to be the most frequently used for bakery products: 10, 12, 15, 17, 18, 19, 20, 21, 23, 25, 26, 27, 29, 30, 31, 32, 33, 35, 39, 40, 41, 43, 45, 49, 55, 59, 65, 69, 75, 79 cents.

Displaying wrapped products received from a central bakery was done by one or more clerks. In some stores, cashiers were used to set up the department, while store or bakery clerks serviced it during the day by straightening and replenishing the shelves.

³ Handling Groceries From Warehouse to Retail Store Shelves. U.S. Dept. Agr. Mktg. Res. Rpt. No. 473, 46 pp., illus. May 1961.



(A)BN-24453



(B)BN-24454



(C)BN-24452

Figure 2.--Various methods of delivering products to retail food stores by commercial bakery drivers: (A) Pans on 2-wheel handtruck with collapsible shelves; (B) baskets stacked on 4-wheel handtruck; and (C) pans on 4-wheel dolly with shelves.

Each commercial driver displayed his own products on the first trip each day. Some drivers made return trips when necessary to replenish their products.

Independent bakery products were in some cases displayed by bakery employees and

in others by store clerks. Bakery employees sometimes wrapped products at the store.

The products were displayed on wall-type or island display (see-through) shelving (fig. 3). The wall-type shelving has a solid back



(A)BN-24455



(B)BN-24451

Figure 3.--Two types of display shelving used for bakery products in self-service bakery departments: (A) wall-type, and (B) island.

panel and can be placed against a wall or similar shelving. It may have from 4 to 6 shelves made of wood, glass, wire, or metal. These shelves can be of equal or different widths; in a level line with other shelves; sloped at an angle in line and adjacent to regular shelves; or staggered. The island shelving has from 3 to 5 tiers, also made of wood, glass, wire, or metal, which are adjustable to different heights. The products were also displayed on end tables, which were put at either end of shelving; wire trays stacked up to 10 high (usually for a fast mover such as the store's economy or special priced bread); a single table; 2 shelf tables; and 3 tables of different sizes that were pyramided one on top of another.

Store clerks and commercial bakery drivers should apply the following procedures for fast and efficient display of products:

1. Before displaying new products, remove all stale and put the remaining product toward the front of the display.
2. Place full containers as close as possible to the display for easy and fast stocking.
3. Use both hands to transfer products.
4. Break down empty cardboard containers and remove from display area.

5. Stack empty wire baskets one into another on dollies and remove to pickup area (fig. 4).



BN-24450

Figure 4.--Wire baskets broken down and stacked on 4-wheel dolly.

DEPARTMENT LOCATION AND SPACE ALLOTMENT

Bakery department location in the store and the amount of space allocated both for the department and for each item can have an effect on the success of the department or the store. The degree these factors affect sales, however, is not known nor has much research been done on this subject. As a rule the bakery department was located either first or last in the store's shopping pattern. In many stores, bakery products were located in two areas. Products received from a central or an independent bakery would usually be located first or last in the shopping pattern, with commercial products, obtained as a secondary source of supply, nearby. In some stores, commercial products would be located in other areas in the store.

In the four stores where detailed studies were made, all of the bakery departments

were located last in the shopping pattern. Management cited several advantages for this location: Bakery products can be put on top of the other groceries in the shopping baskets and not get damaged; the customer has to go through the store to reach the department and may purchase other merchandise; the customer, on seeing the display of various appetizing products just before leaving, will have a favorable impression of the store. Managements having bakery departments near the store entrance believed that the customer would buy more baked goods because of the first aisle location, and the bakery department would create a favorable image, which would influence the customer while shopping.

The bakery departments with service sections had more square feet of selling space and greater total bakery sales than those with

self-service sections only but did not return as high sales per square foot of space allotted (table 2).⁴ In store No. 4, a self-service department, sales were \$7.95 per square foot, the highest of the four stores. Wall-type shelving consisting of six straight tiers was the only shelving used in the store. In stores 1 and 2, sales were \$2.08 and \$2.50 per square foot in the service section of the department, compared to \$5.38 and \$5.32 in the self-service section of the department.

The amount of space allotted for each product in the self-service department varied in each store. It depended on the number and type of display fixtures, straight or angled shelves, and whether the products were stacked one or more high. As a rule, the same amount of shelf space was allotted to the individual items for the entire week. As sales are lower the first part of the week, the products were spread out and stacked one high to avoid empty space. During the latter part of the week, the shelves were utilized to their fullest capacity and extra display tables were often used. Central and independent bakery products were replenished by the store clerks, and some com-

⁴ Square footage was calculated by including all the space from the center of one aisle to the center of another aisle which surrounded the bakery departments.

mercial bakery drivers made return trips to restock their products.

Impulse items such as breakfast rolls, cakes, and pies typically were given space on the top two or three shelves, depending on the number of shelves used. Bread and cracker crumbs and canned bread usually were displayed on the top shelf. Space for demand items (bread and rolls) is usually reserved for the bottom shelves with the lowest shelf holding the large-size white bread. However, there were variations from this procedure in many stores. Tiers of wire baskets that can be stacked up to 10 high and placed next to the shelves or in the aisles were used for specially priced white bread or rolls. With this type of display, other products can be given more space on the shelves, or the bakery department can be decreased in size.

Detailed studies in the four stores showed that a greater percentage of linear feet of bakery space was given to the demand products in self-service departments than in service departments (table 3). Space was determined only by the linear footage given each product. For products that were displayed in tiers of wire baskets, 2 linear feet were allowed for each three baskets. In store No. 2, 33.7 percent of total bakery space was used for the variety breads which were displayed one high

TABLE 2.--Area of bakery departments and average weekly bakery sales per square foot in four retail food stores

Type of bakery department and store number	Area	Sales per square foot	
		Sq. feet	Dollars
Service bakery			
Store 1:			
Service section.....	750	1,561	2.08
Self-service section.....	546	2,940	5.38
Total or average.....	1,296	4,501	3.47
Store 2:			
Service Section.....	250	665	2.50
Self-service section.....	410	2,181	5.32
Total or average.....	660	2,846	4.32
Self-service bakery			
Store 3.....	570	1,738	3.05
Store 4.....	276	2,195	7.95

TABLE 3.--Space allotted to each bakery product in the service and self-service bakery department of four retail food stores¹

Product	Service bakery.				Self-service bakery			
	Store 1		Store 2		Store 3		Store 4	
	Total space	Product space in relation to total	Total space	Product space in relation to total	Total space	Product space in relation to total	Total space	Product space in relation to total
	Feet	Percent	Feet	Percent	Feet	Percent	Feet	Percent
White bread...	25	6.8	260	18.0	285	28.7	82	34.4
Variety bread.	58	15.7	113	33.7	64	21.7	37	15.5
Rolls.....	24	6.5	18	5.4	41	13.8	23	9.7
B & S rolls...	17	4.6	25	7.5	14	4.7	10	4.2
Sweet rolls...	74	20.0	50	15.0	43	14.5	24	10.1
Doughnuts.....	11	3.0	9	2.7	8	2.7	9	3.8
Cake.....	105	28.4	27	8.1	35	11.8	44	18.5
Pie.....	26	7.0	12	3.6	2	0.7	8	3.4
Cookies.....	30	8.0	20	6.0	4	1.4	1	0.4
Total...	370	100.0	334	100.0	296	100.0	238	100.0

¹ Space was calculated by measuring the linear footage given each product on all the shelves and display tables.

² Space for white bread stacked in baskets was calculated as 2 linear feet for each three baskets.

on the shelves. This was higher than for the other stores where they were stacked two or three high. In store No. 1, 35 percent of total space was used for cakes and pies--much higher than the other three stores.

Before allotting space to each product, store management should:

1. Ascertain the number of products that will be carried and the potential sales volume of each.
2. Determine whether wire baskets stacked one on top of another will be used.
3. Determine depth of display shelves.

4. Check design of shelves, whether they are straight or slanted.
5. Determine whether products will be displayed more than one high.
6. Check space provided for special displays or to accent regular displays.

Although each commercial bakery is usually allotted a certain amount of space, there is a tendency for salesmen to squeeze in an extra facing, which may spill over into the next supplier's space. Many suppliers also will display more products than necessary, to hold their allotted space or to try to obtain more.

STALE BAKERY PRODUCTS

An item is considered to be stale and is marked down from its original price or returned to the bakery as unsalable when: (1) It has passed its peak of freshness as determined by company policy; (2) it is damaged; or (3) there is an oversupply of an item, which makes it necessary to reduce the price because the quantity on hand is greater than

could normally be sold when offered at the regular price.

Shelf Life

The number of days a product can remain on display in a fresh and palatable condition is its shelf life. For example, French, Vienna,

or Italian bread will usually have a 1-day shelf life, while other types of bread may have 1, 2, or possibly 3 days. Many companies have set a 1-day shelf life on most of their products to insure freshness. The typical shelf life of both wrapped and unwrapped products are shown in table 4.

Each bakery uses a code as an aid to determine when a product should be removed from the display. The code is stamped on the wrapper of the product with the day of the week indicated by a date, a letter, number, lines, dots, or strip of colored tape. Each day, lines vary in color or number, dots are put in different locations on each product, or a different colored tape is used to close the wrappers.

Causes of Stale Products

The number of products that become stale is largely determined by the firm's shelf life policy. A firm with a rigidly enforced 1-day shelf life policy on most items will have more stakes than one which has a more flexible policy. In stores with a central bakery, the principal reason for stakes was overordering by store personnel. This to a large extent was the result of not using records of previous sales to show the number ordered, left over, and sold each day. Other contributing factors were: (1) Management's desire to have a full supply at all times; (2) products damaged in shipment (fig. 5); (3) careless handling by store personnel and customers; (4) inadequate servicing of displays, resulting in products being left in the backroom or holding area and

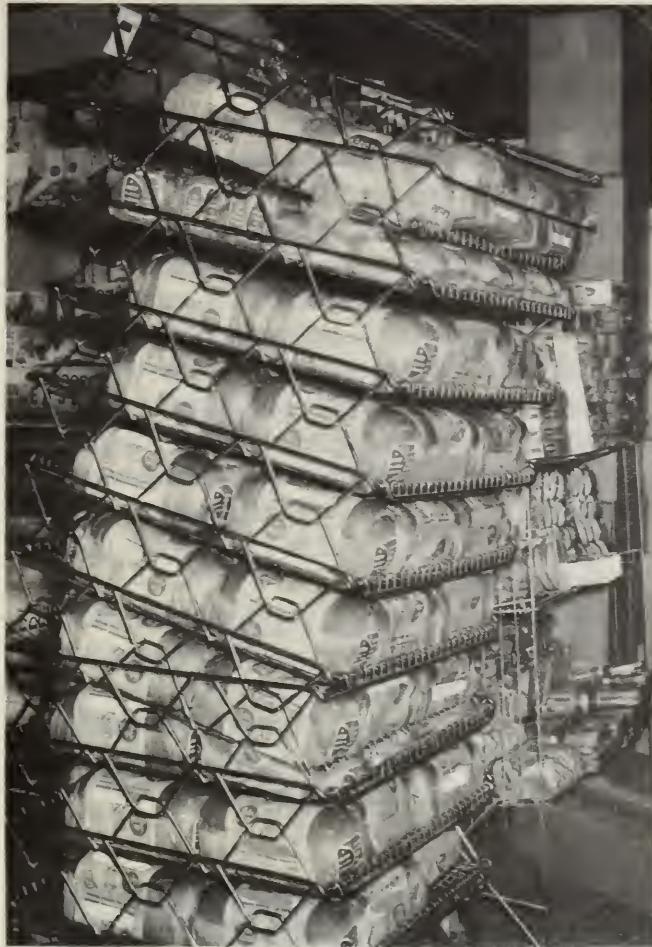
not sold; (5) shelf prices that did not correspond to the prices of products on display; (6) very little or no point-of-sale information on new products, especially bread; (7) oversupply of products because of illegibly written orders or mistakes made by the order filler, or because central bakeries produced full batches or central office personnel increased an order they felt was too low. Commercial bakeries also contributed to the large number of stakes when their drivers stocked more products than necessary in order to fill the shelf space allotted to them or simply overstocked, especially slow-moving products.

The demand products (bread and rolls) had the greatest percentages of stale products in all four stores (table 5). Demand products also had the greatest percentages of sales. In the two stores with service departments, bread and rolls made up 63 and 72 percent of the total stale products but were 51 and 59 percent of total sales. In the two self-service stores, bread and rolls were 68 and 82 percent of total stale products and 70 and 78 percent of total sales. Combining the figures in the four stores showed that bread and roll sales were 62 percent of total sales and 70 percent of total stale products. This is contrary to the accepted industry belief that fast-moving demand products have a smaller percentage of loss or rejects.

Total stale products in the four stores varied from 7.1 to 15.7 percent of their total bakery sales. Stores No. 2 and No. 3, located in the same metropolitan area, had the highest percentages of stakes. Store No. 4, handling all commercial products, had a higher percentage

TABLE 4.--Typical shelf life of various bakery products handled in retail food stores

Product	Unwrapped products	Wrapped products
	<u>Days</u>	<u>Days</u>
Bread.....	1	1-3
Rolls - hard.....	1	1-2
Rolls - soft.....	1	2-3
Rolls - B & S.....	--	5-7
Sweet rolls.....	1	2-3
Doughnuts.....	1	1-2
Cake.....	1-3	1-7
Pie.....	1-2	1-2
Cookies.....	5-10	5-10



(A)BN-24456



(B)BN-24457

Figure 5.--Two causes of damage to bakery products in shipment: (A) wire basket display improperly set up; and (B) pans not properly placed in shipping cabinet.

TABLE 5.--Distribution of sales and of stale bakery products in 1 week in four retail food stores, by product

Product	Service bakery				Self-service bakery			
	Store 1		Store 2		Store 3		Store 4	
	Sales	Stale products	Sales	Stale products	Sales	Stale products	Sales	Stale products
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
White bread..	23.5	8.0	28.5	32.4	39.3	15.6	46.2	51.2
Variety bread	18.4	30.4	21.6	34.8	18.6	38.2	13.1	18.2
Rolls.....	8.7	25.1	9.0	5.0	12.2	14.6	18.9	12.6
B & S rolls..	3.8	.3	2.9	1.4	2.6	0	1.7	1.2
Sweet rolls..	12.5	15.6	16.1	12.1	14.5	17.4	5.4	2.4
Doughnuts....	6.0	9.0	5.8	4.5	5.4	4.8	2.1	2.4
Cake.....	18.8	9.3	10.0	9.8	6.5	8.5	9.3	9.4
Pie.....	4.7	2.3	3.1	0	.5	.9	3.2	2.6
Cookies.....	3.6	0	3.0	0	.4	0	.1	0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total value of products	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
	4,501	318	2,846	357	1,738	273	2,195	184

of stale white bread than variety bread while in the other three stores the percentage of stale variety bread was higher than the white bread.

The percentage of stale specialty products such as cakes and pies, as related to sales, was much lower than for demand items. Undoubtedly this is because stores would accept empty space on shelves for these products but not for bread or rolls.

Disposition of Stale Products

Company policy or store management decisions generally determine when products will be removed from display, the markdown procedure, and disposition of the products. Some of the more typical ways of handling, considered the best methods for the companies and the stores in the survey, were: (1) Discount from 5 cents to 50 percent of selling price and display for resale; (2) sell at a discount to employees or certain customers who stop at the store each day; (3) donate or sell at special prices to institutions; (4) send to a central store designated to sell at discount all stale products from company stores in the area; and (5) discard. Many firms use a combination of the above disposal procedures. The method of disposition will, in large part, be dictated by the salability of the product. Often there is a discount, then another discount, and products remaining are eventually discarded. The disposal problem can be decreased by more effective ordering and merchandising procedures. The number of stale products that are bound to occur can be reduced by a sound program of handling.

Various methods were used to price the stale products. The clerk would: (1) Mark the product with an "X" when all products were reduced the same amount; (2) write the discount price over the regular price; (3) staple a strip of paper around the product to let the checkers know it was discounted; or (4) put a "¢ off" gummed label on the product and write the discount price on it. Unwrapped products were packaged or boxed and the reduced prices written on the package. In some stores, there were no signs to indicate that products on display were discounted. The customer, on picking up the product, would see the discount price. In some stores where products were

stamped with the day of the week, the checkers would discount the products that had the previous day stamped on them.

The discounted products were displayed on tables, shelves, wire racks, and shopping carts (fig. 6). They were placed in or near the bakery department, near the checkout counters, or in other locations throughout the stores.

In one firm where detailed records were kept for 1 week, 67.6 percent of the original value of the products was recovered (table 6). The discounted price was put on each product and the products were prominently displayed on a table and a wire rack in the department. There was no way of determining what effect the sale of these products had on the sale of fresh products.

Unsold stakes should be discarded after 1 day on display. Otherwise, if the consumer purchases a day-old product when in reality it is older, she could correlate its taste and quality with a fresher product and consequently might hesitate to purchase any fresh products in the department.



BN-18134

Figure 6.--Wire rack display of stale bakery products in a retail food store.

TABLE 6.--Percentage of original value of bakery products recovered by sale of stale products in one retail food store bakery department (1 week's sales)

Product	Value of fresh product	Amount recovered by sale of stale product	Percentage of original value recovered
	<u>Dollars</u>	<u>Dollars</u>	<u>Percent</u>
White bread.....	20.07	15.62	77.8
Variety bread....	89.93	66.35	73.8
Rolls.....	78.46	55.03	70.0
Sweet rolls.....	48.84	29.17	60.0
Doughnuts.....	28.46	17.50	61.5
Cakes.....	23.69	12.47	52.6
Pies.....	6.40	3.91	61.0
Total or average.....	295.85	200.05	67.6

Commercial stale products were returned to the bakeries by the drivers and displayed in the bakeries' thrift stores to be sold at a reduced price. Usually, stakes of the independent bakeries were also returned to the bakeries and sold at their thrift stores.

Methods of Reducing Occurrence of Stale Products

The principal methods of reducing the number of products that go stale are improved ordering, recordkeeping, and merchandising of any oversupply of products. A daily record of product sales, number ordered, and carry-over, plus other pertinent information that would have an unusual effect on sales, will enable store bakery personnel to order more accurately not only for the following week, but also for seasonal, holiday, and festive occasions. A tie-in with another department, such as displaying rolls with ground meat or hot dogs in the meat department, often helps to increase sales. Setting up displays in strategic locations in the store, personal selling, giving samples, advertising over the loud-speaker, attaching a "¢ off" coupon on the

product, or reducing the price of one product with the purchase of similar or other types of products are other ways of increasing sales and thereby reducing an oversupply. Better handling of products when store personnel are receiving, price marking, and displaying should be stressed. At the central bakery, attention should be given to the correct reading of the number ordered on the order form, careful handling of the products, and on-time delivery.

A sound program of displaying the products each day would increase sales and also contribute to reducing the number of stale products. To accomplish this, bakery personnel should: (1) Come in before the store opens to set up the department so that all products are ready for sale by opening and all empty carriers and containers are removed from the sales area; (2) display products as soon as received throughout the day; (3) rotate products, putting the old ones to the front and those just received to the rear; (4) service and straighten the entire department frequently; and (5) remove and display all products from the holding area as soon as possible to eliminate the possibility of their being left there overnight.

LABOR COSTS AND METHODS OF REDUCING THEM

Labor costs vary in service and self-service bakery departments because of the different methods of handling the products. In a service department, one or more bakery clerks prepare and display the products in the showcases. During the day they: (1) Give service to customers by obtaining, wrapping, and pricing purchases; (2) repackage, reprice, and dispose of stale products; (3) wrap products for display; (4) demonstrate new or special-price products; (5) order products for future delivery; (6) write orders for special products requested by customers; and (7) in some stores, handle other functions such as a free coffee bar for customers.

In a self-service department, the clerks spend only as much time as necessary to: (1) Bring full containers to the display area, display the products, and remove carriers and containers; (2) remove, reprice, and redisplay stale products; (3) service the department periodically during the day; (4) order products for future delivery; and (5) write orders for special products requested by customers.

In a service department some of the costs for handling the products, such as labor, materials, and equipment, are transferred from the central bakery to the store's bakery department.

When products such as bread and rolls are wrapped at the bakery and shipped to the stores with the unwrapped products, they are, in many stores, displayed by store clerks. Thus, labor charges to the bakery department are charged only to those products sold on a service basis and those packaged in the store, while the products sold on a self-service basis are charged to the grocery department. Many times labor costs for a bakery department are not accurately measured by existing store records.

Labor costs for checking commercial products in and out of the store are usually charged to the grocery department. However, in some service bakery departments, the bakery clerks may check the products with the time being

charged either to the grocery or bakery department.

In the four retail food stores studied, labor costs were much higher in service departments than in self-service departments. Cost for each unit sold was 2.5 cents, compared to 0.4 and 0.5 cent in the self-service departments (table 7). Although store time for handling stale products was included in the total time, the number of stale units sold were not included.

In stores 1 and 2, store labor costs were 8.3 cents and 9.8 cents for each unit sold in the service section, while in the self-service section labor costs were 0.8 and 1.2 cents for each unit sold. Store costs for commercial bakery products are for checking the products.

The cost of operating a service bakery department is high, yet management may deem the service necessary because of competitive reasons, customers' demands, or the possibility of increased sales not only in the bakery department but the entire store. The following procedures will lower costs: (1) Supply necessary price markers, staplers, scales, and wrapping materials in convenient locations along the sales counter; (2) provide jobs associated with the bakery department or in the department area to utilize each clerk's time between customers; (3) if products are packaged to be displayed, furnish all necessary work tools and supplies plus an adequate work area.

For both service and self-service departments, management should: Write a job description for each clerk outlining specific duties and approximate time for their completion; instruct clerks connected with the bakery department to have the departments set up before the store opens; teach each clerk the store's methods of ordering, recordkeeping, displaying, and merchandising.

The self-service department should be the responsibility of one clerk the entire day with a substitute to take over in his absence and help

TABLE 7.--Store labor costs for handling bakery products for 1 week in four retail food stores, by type of bakery department and supplier of products to self-service sections or departments

Type of bakery department, store number, and supplier of products	Units sold ¹	Labor for handling		Cost per unit sold ²
		Total	Per unit	
Service bakery				
Store 1:				
Service section.....	3,650	7,560	2.07	8.3
Self-service section:				
Company bakery.....	7,113	1,500	.21	.8
Commercial bakery.....	4,025	300	.07	.3
Total or average.....	14,788	9,360	----	2.5
Store 2:				
Service section.....	1,647	4,020	2.44	9.8
Self-service section:				
Company bakery.....	7,500	2,340	.31	1.2
Commercial bakery.....	1,275	240	.19	.8
Total or average.....	10,422	6,600	----	2.5
Self-service bakery				
Store 3:				
Independent bakery.....	1,731	480	.28	1.1
Commercial bakery.....	4,504	300	.07	.3
Total or average.....	6,235	780	----	.5
Store 4:				
Commercial bakery.....	8,525	840	.10	.4

¹ Does not include the number of stale products sold.

² Totals are weighted averages. Average wage of store personnel was \$2.40 per hour.

set up when necessary. Management should establish a Procedure for receiving commercial products and follow through to insure its adoption. In one store, each driver was instructed to: (1) Bring an empty container into the store to use for stale products; (2) write the name, number, and total value of the stale products on an order pad; (3) write the order and return to the truck to assemble it;

(4) price mark all unpriced products before entering the store; (5) transport products to the store to be checked by a clerk; (6) display the products; and (7) before leaving the store, have a clerk check stakes and give the clerk a copy of the completed order form. This procedure enabled the driver and clerk to perform their tasks faster and more efficiently.

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